Project management

MS project tutorial

Part 1: Project beginning and the Gantt chart

Purpose

- Project management by using Microsoft Project software

Introduction

Project management is a process of organizing, scheduling and managing a set of tasks.

In the phase of project planning the project goals have to be known. The project is divided to several tasks with known duration.

In the phase of scheduling it is determined when a single task begins and ends. The tasks are scheduled in such a way that the resources, costs and the duration of the project are optimized.

The table below lists 10 tasks of a project and their duration in days.

Task	Duration
А	0
В	5
С	2
D	3
Е	4
F	1
G	6
Н	2
Ι	3
J	0

Assignments

1. Open the MS Project software and select a new project.

Steps	Description
Open MS Project	
Begin new project	File > New
Select view: Gantt chart	View > Gantt chart

Enter	Project > Project Information									
project start date:	Start date: 29.4.2013									
	Project Info	rmation for 'Project1'					×			
	Start <u>d</u> ate:	Mon 29.4.13	•	Current date:	Wed 13.3.13		•			
	Einish date:	Mon 4.3.13	-	Status date:	NA		•			
	Schedu <u>l</u> e from:	Project Start Date	•	C <u>a</u> lendar:	Standard		•			
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2. Insert tasks in the same order as given in table 1 into the Gantt chart.

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until all tasks are						
Inserted.	G	Task Name 🖕	Duration 🖕	Start 🖕	22 Apr '13	29 Apr '13 6 May '13
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	4	D	1 day	Mon 29.4.13		
	5	E	1 day	Mon 29.4.13		
	6	F	1 day	Mon 29.4.13		
	7	G	1 day	Mon 29.4.13		
	8	Н	1 day	Mon 29.4.13		
	9	I	1 day	Mon 29.4.13		
	10	J	1 day	Mon 29.4.13		

3. Determine the duration of tasks.

Steps

Description

Select the field Duration of the first task

Enter the value 0 and press ENTER

Enter the values for all tasks.

label	meaning
m	minutes
h	hours
d	days
w	weeks

Table 2: Time units

The task with duration 0 is called the **milestone**. Milestones serve for marking important events in a project. For example, they are used for marking the beginning and the end of a project.

4. Save the project into your folder.	
Steps	Description
Select in the File menu:	File > Save as
Select your folder	
Enter the name of the project and press ENTER	
Select:	Save 'Project1.mpp' without a baseline

Part 2: Determining the dependencies between tasks and critical path

Goal

- Linking the tasks in the Gantt chart and the work with time constraints

Introduction

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The tasks in a project are interdependent. A task can begin after the completion of previous tasks or combined with other tasks. The start of a certain task is therefore dependent of the finish of other (previous) tasks.

The following dependencies may apply for two tasks: finish-to-start, start-to-Start, finish-to-finish and start-to finish.

- finish-to-start: the task cannot start until the finish of the previous task.
- start-to-start: the task can start at the same time as the previous task.
- finish-to-finish: the task cannot finish until the finish of the previous task.
- start-to finish: the task cannot finish until the start of the previous task.

Label	Description	Gantt chart
FS	finish-to-start	S F S F
SS	start-to-start	S F S F
FF	finish-to-finish	S F S F

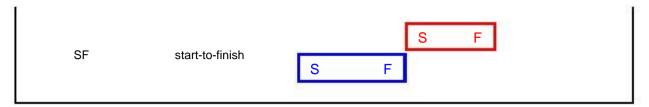


Figure 1: Task dependencies

The table gives task dependencies for our example. All dependencies are finish-to-start.

Task	Previous task (predecessor)
А	-
В	А
С	В
D	С
Е	D
F	Е
G	В
Н	G
Ι	Н
J	F, I

Assignments

5. Link the activities in the Gantt Chart with finish-to-start dependencies.

Steps	Description
Select task A	CLICK on task A
Select task B	Hold CTRL and CLICK on task B
Select Link Tasks in the	Edit > Link tasks or the button in the toolbar
toolbar	Tasks are connected by a finish-to-start dependency.
To delete the connection select Unlink Tasks	$\overleftarrow{\mathbf{E}}$ Edit > Unlink tasks or the button in the toolbar
	The proper tasks (that you wish to link or unlink) have to be selected!
Connect all the tasks according to the table above	

Use Zoom In and Zoom Out So that the entire project is visible Select *Q* or *Q* in the toolbar

 $Or \ use \ View > Zoom \ and \ select \ Entire \ project$

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The critical path is the longest path in the Gantt chart comprised of critical tasks.

Critical tasks don't have any time slack.

6. Determine the critical path in the Gantt chart.

Steps	Description				
Use tool GanttChartWizard	Select	Format > Gannt Chart Wizard or the button in the toolbar			
	Select Next and Critical path				
	Select Next and Resources and dates				
	Select Next and Yes, p	blease			
	and Format it				

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Change the duration of noncritical tasks and observe the critical path.

Return the Gantt chart back to its original state.

Project phases

If a project is comprised of many tasks they can be combined into project phases.

Phase	Tasks	
F1	C, D, E, F	
F2	G, H, I	

7. Add project phases

Add new task before B

Steps

Description

Select task C Select Insert > New Task Enter phase name F1 Select tasks C, D, E, F

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Repeat for phase 2.

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It is important that only tasks are linked. There must be no connection between tasks and phases or between phases! If there is such a connection, it has to be removed!